

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q78309

Yutaka TOSAKI, *et al.*

Appln. No.: 10/701,496

Group Art Unit: 1771

Confirmation No.: 7626

Examiner: Daniel R. ZIRKER

Filed: November 6, 2003

For: PRESSURE-SENSITIVE ADHESIVE TAPE OR SHEET

SUPPLEMENTAL DECLARATION UNDER 37 C.F.R. § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Yutaka TOSAKI, hereby declare and state:

THAT I am a citizen of Japan;

THAT I graduated from Kobe University, Faculty of Engineering, Department of Industrial Chemistry, in March of 1986;

THAT I have been employed by Nitto Denko Corporation since April of 1986, where I have been engaged, from 1986 to the present, in research and development regarding pressure-sensitive adhesive tape; and

THAT I am familiar with the prosecution of the above-identified U.S. patent application, including the Advisory Action mailed July 20, 2007, and the final Office Action mailed March 15, 2007, containing a rejection of Claims 1-7 under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,571,617 to Coopridier et al.

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(1) Supplemental Comments to the Declaration Submitted July 13, 2007

(A) Molecular Weight of the Polyacrylic Acid

In the examples of Cooprider, alkylsulfate, alkylbenzene sulfate, etc. were used as an emulsifier, and polyacrylic acid (molecular weight: 190,000 or 240,000) or polyacrylamide was used as a hydrophilic polymer. In Example 8 of Cooprider, ammonium laurylsulfate was used as an emulsifier, and polyacrylic acid (molecular weight: 190,000) was used as a hydrophilic polymer. Accordingly, the polymerization formulation of Example 8 of Cooprider is substantially similar to the other examples. Therefore, even if the other examples are reproduced, I believe that the same results would be obtained. In addition, I believe that one of ordinary skill in the art would expect the other Examples to have an amount of sulfur atom-containing anionic emulsifier in the surface portion of the PSA layer that is similar to Example 8.

Further, because the polyacrylic acids used in the Declaration submitted July 13, 2007, have a molecular weight of 150,000 or 250,000, a molecular weight slightly lower than the molecular weight of 190,000 used in Example 8 of Cooprider and a molecular weight slightly higher than the molecular weight of 190,000 were verified. In Examples 13, 14, 16, and 18-20 of Cooprider, polyacrylic acid (molecular weight: 240,000) was used as a hydrophilic polymer. The molecular weight is almost the same as that of the polyacrylic acid having a molecular weight of 250,000 used in the Declaration.

Therefore, the amount of sulfur atom-containing anionic emulsifier in the surface portion of the PSA layer of Example 8 would fall between 8.7 (amount when polyacrylic acid MW 250,000 was used) and 11.1 (amount when polyacrylic acid MW 150,000 was used), which is outside the recited range of 0.1-3.

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Further, because Cooprider only discloses that the polyacrylic acid has a molecular weight more than 5,000, the polyacrylic acids having molecular weights of 190,000 or 240,000 used in the Declaration fall within the scope of Cooprider.

Accordingly, in the Declaration, because the emulsifier was the emulsifier used in Cooprider, and polyacrylic acids were those extremely similar to those within the scope of Cooprider, I consider that the polymerization formulation was faithfully reproduced and the experimentation was appropriate.

(B) Timing of the Addition of the Hydrophilic Polymer

In the Examples of Cooprider, a segregation reduction effect (i.e., an emulsifier concentration gradient) similar to that of the presently claimed PSA is not achieved even though a hydrophilic polymer is added. The reason why this is so is most clearly seen by examining the method of adding the hydrophilic polymer in Cooprider.

Cooprider teaches a PSA layer wherein the hydrophilic polymer is added as the polymerization stabilizer before the polymerization. However, in order for the polymerization of the acrylic polymer (A) to not be adversely affected, the hydrophilic polymer (C) is preferably added to the aqueous dispersion type PSA composition after the polymerization of the acrylic polymer (A).

Further, Cooprider discloses that the hydrophilic polymer adheres to the particle surface when added before the polymerization. However, in the present PSA tapes or sheets, since the hydrophilic polymer is added after the polymerization, the hydrophilic polymer is dispersed in a lump state (i.e., in a state not adhering to the particle surface) in the PSA after the PSA composition is applied and dried. Significantly, the dispersed lump state causes excellent initial adhesion to the dewing surface or wet surface, which is the effect of the present tapes or sheets.

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From this viewpoint, the present tapes or sheets and Cooprider are totally different from each other, and one of the primary distinguishing characteristics of the presently claimed PSA over Cooprider is realized.

Further, the aimed effect of the present tapes or sheets is excellent initial adhesion to a dewing surface or wet surface and excellent peeling-preventing properties, while the effect of Cooprider is excellent reapplication. Thus, the effects of the present tapes or sheets and Cooprider are also quite different.

(2) Conclusion

From the result of the reproduction experiments illustrated in the Declaration submitted July 13, 2007, it is clear that Cooprider clearly deviates from the range defined by the present application. Namely, with respect to the description set forth in Claim 1 of the present application, "in a surface portion of the pressure-sensitive adhesive layer within the range of up to 3 nm inward from the outer face of the pressure-sensitive adhesive layer, an anionic emulsifier containing a sulfur atom is contained in a proportion of from 0.1 to 3 parts by weight based on 100 parts by weight of the whole of the monomer components constituting the acrylic polymer," the anionic emulsifier non-uniformly exists in from 8.7 to 11.1 parts by weight at the surface portion, thus largely deviating from the range claimed in the present application.

Accordingly, it can be concluded that the present claimed subject matter cannot be anticipated by the cited reference, Cooprider.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States

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Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: September 12, 2007

Yutaka Tosaki
Yutaka TOSAKI